

What is claimed is:

1. A yarn comprising a consolidated fiber of (a) discontinuous
5 filaments of different lengths that have not been drawn and are intermingled along a
length of the yarn to maintain a unity of the yarn, and (b) continuous filaments
intermingled with the discontinuous filaments along the length of the yarn;
wherein the discontinuous filaments comprise materials selected from
the group consisting of nylon, polyester, an aramid, a fluoropolymer, an acetate
10 polymer or copolymer, an acrylic polymer or copolymer, polyacetal, an acrylate
polymer or copolymer, polyacrylonitrile, a cellulose polymer, an olefin polymer or
copolymer, polyimide, a styrenic polymer or copolymer, an ether/ester copolymer, a
copolymer of an amide with an ether and/or ester, a vinyl polymer, and a polyimide;
and mixtures of any two or more thereof; and
15 wherein the continuous filaments comprise different materials selected
from the group consisting of nylon, polyester, an aramid, a fluoropolymer, an acetate
polymer or copolymer, an acrylic polymer or copolymer, polyacetal, an acrylate
polymer or copolymer, polyacrylonitrile, a cellulose polymer, an olefin polymer or
copolymer, polyimide, a styrenic polymer or copolymer, an ether/ester copolymer, a
20 copolymer of an amide with an ether and/or ester, a vinyl polymer, a polyimide, a
polyurethane, a copolymer having blocks of polyurethane and blocks of polymerized
ethers and/or esters, a natural fiber, a metallic fiber or wire, a glass fiber or a ceramic
fiber; and mixtures of any two or more thereof.
- 25 2. A yarn according to Claim 1 wherein the discontinuous filaments
comprise materials selected from the group consisting of nylon, polyester, an aramid,
a fluoropolymer, a cellulose polymer, an olefin polymer or copolymer, an ether/ester
copolymer, a vinyl polymer, and mixtures of any two or more thereof
- 30 3. A yarn according to Claim 1 wherein the wherein the continuous
filaments comprise different materials selected from the group consisting of nylon,
polyester, an aramid, a fluoropolymer, an acrylic polymer or copolymer, a cellulose
polymer, an olefin polymer or copolymer, a styrenic polymer or copolymer, an
ether/ester copolymer, a vinyl polymer, a polyimide, a polyurethane, a copolymer

having blocks of polyurethane and blocks of polymerized ethers and/or esters, a natural fiber, a metallic fiber or wire, a glass fiber or a ceramic fiber; and mixtures of any two or more thereof.

5 4. A yarn according to Claim 1 wherein the discontinuous filaments
comprise materials selected from the group consisting of nylon, polyester, an aramid,
a fluoropolymer, a cellulose polymer, an olefin polymer or copolymer, and mixtures
of any two or more thereof; and wherein the continuous filaments comprise different
materials selected from the group consisting of nylon, polyester, an aramid, a
10 fluoropolymer, a cellulose polymer, an olefin polymer or copolymer, a polyurethane,
a copolymer having blocks of polyurethane and blocks of polymerized ethers and/or
esters, a metallic fiber or wire, a glass fiber or a ceramic fiber; and mixtures of any
two or more thereof.

15 5. A yarn comprising a consolidated fiber of (a) discontinuous
filaments of different lengths that have been drawn and are intermingled along a
length of the yarn to maintain a unity of the yarn, and (b) continuous filaments
intermingled with the discontinuous filaments along the length of the yarn;
 wherein the discontinuous filaments comprise materials selected from
20 the group consisting of nylon, polyester, an olefin polymer or copolymer, an
ether/ester copolymer, an acrylic polymer or copolymer, polyacetal, poly(vinyl
chloride), and mixtures of any two or more thereof.; and
 wherein the continuous filaments comprise different materials selected
from the group consisting of nylon, polyester, an aramid, a fluoropolymer, an acetate
25 polymer or copolymer, an acrylic polymer or copolymer, polyacetal, an acrylate
polymer or copolymer, polyacrylonitrile, a cellulose polymer, an olefin polymer or
copolymer, polyimide, a styrenic polymer or copolymer, an ether/ester copolymer, a
copolymer of an amide with an ether and/or ester, a vinyl polymer, a polyimide, a
polyurethane, a copolymer having blocks of polyurethane and blocks of polymerized
30 ethers and/or esters, a natural fiber, a metallic fiber or wire, a glass fiber or a ceramic
fiber; and mixtures of any two or more thereof.

6. A yarn according to Claim 5 wherein the discontinuous filaments
comprise materials selected from the group consisting of nylon, polyester, an olefin

polymer or copolymer, an ether/ester copolymer, and mixtures of any two or more thereof

7. A yarn according to Claim 5 wherein the wherein the continuous
5 filaments comprise different materials selected from the group consisting of nylon, polyester, an aramid, a fluoropolymer, an acrylic polymer or copolymer, a cellulose polymer, an olefin polymer or copolymer, a styrenic polymer or copolymer, an ether/ester copolymer, a vinyl polymer, a polyimide, a polyurethane, a copolymer having blocks of polyurethane and blocks of polymerized ethers and/or esters, a
10 natural fiber, a metallic fiber or wire, a glass fiber or a ceramic fiber; and mixtures of any two or more thereof.

8. A yarn according to Claim 5 wherein the discontinuous filaments
comprise materials selected from the group consisting of nylon, polyester, an olefin
15 polymer or copolymer, and mixtures of any two or more thereof; and wherein the continuous filaments comprise different materials selected from the group consisting of nylon, polyester, an aramid, a fluoropolymer, a cellulose polymer, an olefin polymer or copolymer, a polyurethane, a copolymer having blocks of polyurethane and blocks of polymerized ethers and/or esters, a metallic fiber or wire, a glass fiber
20 or a ceramic fiber; and mixtures of any two or more thereof.

9. A yarn comprising a consolidated fiber of (a) discontinuous
filaments of different lengths that have been drawn and are intermingled along a
length of the yarn to maintain a unity of the yarn, and (b) discontinuous filaments of
25 different lengths that not have been drawn and are intermingled along a length of the yarn to maintain a unity of the yarn;

wherein the discontinuous drawn filaments comprise materials selected
from the group consisting of nylon, polyester, an olefin polymer or copolymer, an
ether/ester copolymer, an acrylic polymer or copolymer, polyacetal, poly(vinyl
30 chloride), and mixtures of any two or more thereof.; and

wherein the discontinuous filaments that are not drawn comprise
different materials selected from the group consisting of nylon, polyester, an aramid, a
fluoropolymer, an acetate polymer or copolymer, an acrylic polymer or copolymer,
polyacetal, an acrylate polymer or copolymer, polyacrylonitrile, a cellulose polymer,

an olefin polymer or copolymer, polyimide, a styrenic polymer or copolymer, an ether/ester copolymer, a copolymer of an amide with an ether and/or ester, a vinyl polymer, and a polyimide; and mixtures of any two or more thereof.

5 10. A yarn according to Claim 9 wherein the drawn discontinuous filaments comprise materials selected from the group consisting of nylon, polyester, an olefin polymer or copolymer, an ether/ester copolymer, a vinyl polymer, and mixtures of any two or more thereof

10 11. A yarn according to Claim 9 wherein the discontinuous filaments that have not been drawn comprise materials selected from the group consisting of nylon, polyester, an aramid, a fluoropolymer, a cellulose polymer, an olefin polymer or copolymer, an ether/ester copolymer, a vinyl polymer, and mixtures of any two or more thereof.

15 12. A yarn according to Claim 9 wherein the drawn discontinuous filaments comprise materials selected from the group consisting of nylon, polyester, an olefin polymer or copolymer, and mixtures of any two or more thereof; and wherein the discontinuous filaments that have not been drawn comprise materials
20 selected from the group consisting of nylon, polyester, an aramid, a fluoropolymer, a cellulose polymer, an olefin polymer or copolymer, an ether/ester copolymer, and mixtures of any two or more thereof.

 13. A yarn according to Claim 9 further comprising continuous
25 filaments intermingled with the discontinuous filaments along the length of the yarn; wherein the continuous filaments comprise different materials selected from the group consisting of nylon, polyester, an aramid, a fluoropolymer, an acetate polymer or copolymer, an acrylic polymer or copolymer, polyacetal, an acrylate polymer or copolymer, polyacrylonitrile, a cellulose polymer, an olefin polymer or copolymer,
30 polyimide, a styrenic polymer or copolymer, an ether/ester copolymer, a copolymer of an amide with an ether and/or ester, a vinyl polymer, a polyimide a polyurethane, a copolymer having blocks of polyurethane and blocks of polymerized ethers and/or esters, a natural fiber, a metallic fiber or wire, a glass fiber or a ceramic fiber; and mixtures of any two or more thereof.

14. A yarn according to Claim 9 wherein the continuous filaments comprise different materials selected from the group consisting of nylon, polyester, an aramid, a fluoropolymer, a cellulose polymer, an olefin polymer or copolymer, a polyurethane, a copolymer having blocks of polyurethane and blocks of polymerized ethers and/or esters, a metallic fiber or wire, a glass fiber or a ceramic fiber; and mixtures of any two or more thereof.

15. A yarn according to Claim 1 or 5 wherein the average length, avg, of the discontinuous filaments is greater than 6 inches, and the fiber has a filament length distribution characterized by the fact that 5% to less than 15% of the filaments have a length that is greater than 1.5avg.

16. A yarn according to Claim 1 or 5 wherein the average length, avg, of the discontinuous filaments is greater than 6 inches, and the fiber has a filament length distribution of 5% to less than 15% of the filaments having a length less than 0.5avg, and that 5% to less than 15% of the filaments have a length that is greater than 1.5avg.

17. A yarn according to Claim 1 or 5 wherein at least 1% of the discontinuous filaments in the yarn by denier comprises a fiber having a filament-to-filament coefficient of friction of 0.1 or less.

18. A yarn according to Claim 1 or 5 wherein at least 1% of the discontinuous filaments in the yarn have a filament cross-section having a width and a plurality of thick portions connected by thin portions within the filament width, and the thin portions at the ends of the discontinuous filaments are severed so the thick portions are separated for a length of at least about three filament widths to thereby form split ends on the filaments.

19. A yarn according to Claim 1 or 5 wherein at least 1% of the discontinuous filaments in the yarn by denier comprises a fiber having filaments with a latent elasticity of 30% or more.

20. A yarn according to Claim 1 or 5 wherein at least 1% of the discontinuous filaments in the yarn by denier is a bicomponent yarn comprising a first component of 2GT polyester and a second component of 3GT polyester.

5 21. A yarn according to Claim 1 or 5 wherein at least 1% of the yarn by denier comprises a fluoropolymer.

 22. A yarn according to Claim 1 or 5 wherein the fiber in the yarn comprises at least two fibers that have visually distinct differences detectable by an
10 unaided eye.

 23. A yarn according to Claim 1 or 5 wherein the differences comprise a difference in colors, the colors of the fibers excluding neutral colors having a lightness greater than 90%, and the colors of the fibers having a color difference of at
15 least 2.0 CIELAB units, the lightness and color difference measured according to ASTM committee E12, standard E-284, to form a multicolored yarn.

 24. A yarn according to Claim 1 or 5 wherein the continuous filaments have less than 10% elongation to break.
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 25. A yarn according to Claim 1 or 5 wherein the continuous filaments comprising elastic filaments having an elongation to break greater than about 100% and an elastic recovery of at least 30% from an extension of 50%.